

DIGITAL COMMUNICATIONS METHOD AND SYSTEM FOR COMMUNICATING OVER CHANNELS WITH BLOCK FADING AND BURST JAMMING

ABSTRACT OF THE DISCLOSURE

Method and apparatus are disclosed for obtaining improved performance when using Forward Error Correction (FEC) with channels experiencing block fading or burst jamming over some number of contiguous symbols. One suitable application is when the channel is periodically obstructed due to the rotation of a propeller blade, resulting in a periodic block fading channel. During operation zero symbols are inserted into the received signal stream, prior to the FEC decoder at times that are estimated or otherwise determined to correspond to periods of jamming or severe fading. The zero symbols effectively "erase" the severely degraded symbols. The zero symbols are less detrimental to the FEC decoder than the severely degraded symbols, especially when the channel interleaving/de-interleaving operations result in the zero symbols being temporarily distributed over a large block of received symbols.